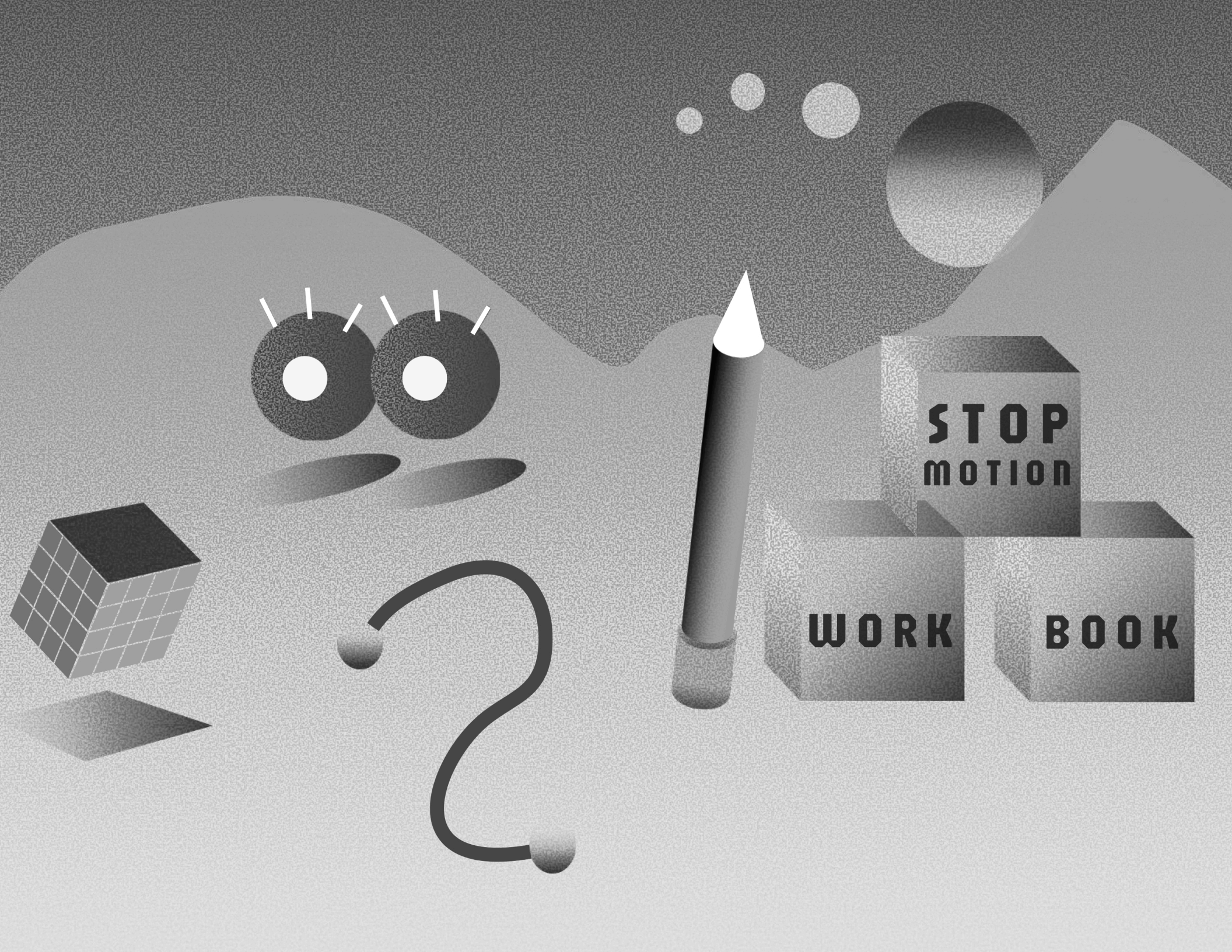
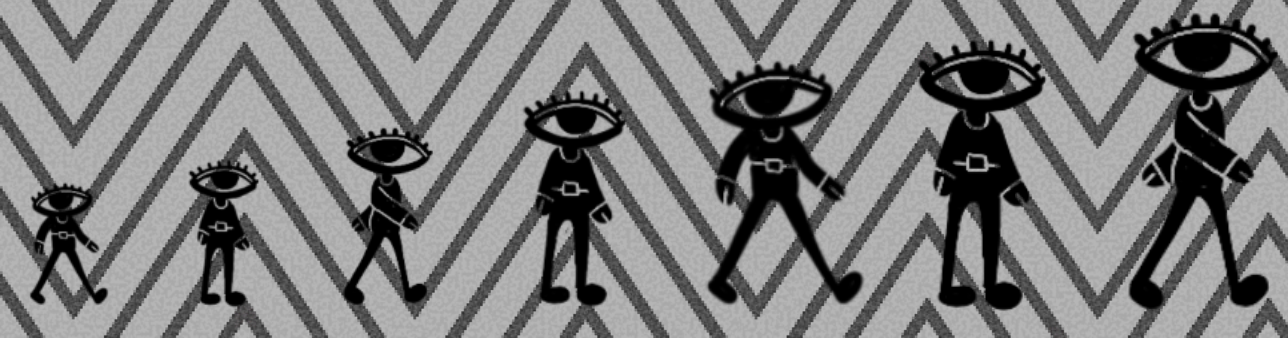

STOP
MOTION
WORK
BOOK

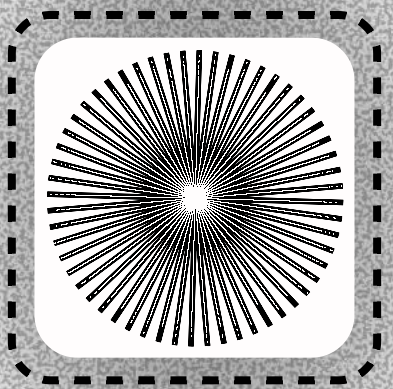
THIS BOOK ATTEMPTS TO PROVIDE BEGINNERS AND EXPERTS ALIKE WITH QUICK AND INFORMATIVE EXERCISES AND ACTIVITIES TO GET FAMILIAR WITH STOP MOTION ANIMATION. A LOT OF THE INFORMATION WILL HAVE A CROSSOVER WITH 2D ANIMATION, SOME OF IT WON'T. THERE'S NO WAY IT WILL COVER IT ALL, BUT IT WILL PROVIDE THE STOP MOTION ENTHUSIAST A WAY TO GET STARTED AND MAKE SOMETHING COOL.

THIS BOOK WAS DESIGNED AND PRINTED BY SHAWN BREWER ON A RISO RZ-990 IN PORTLAND, MAINE IN THE 25TH YEAR OF THE 21ST CENTURY.



EXIT

focus checker



CUT . ME

EDITION # . /65

@FANTASY.FIEND

APPENDIX B
Further SUPPLIES

RIGS/TOOLS FOR ANIMATING

WIRE
WINDER RIGS
CLEAR LEGOS
CLEAR WAX / MUSEUM WAX
POLYMER CUBES
GAFFER TAPE
A-CLAMPS

CAMERA/ LIGHTING

DSLR - NIKON/CANON
MANUAL APERTURE LENS
LED MONOLIGHT 2 LIGHT KIT
SOFTBOX
FOCUS CHECKER (INCLUDED AT BACK OF THIS BOOK!)
BOUNCE BOARD
TRIPOD

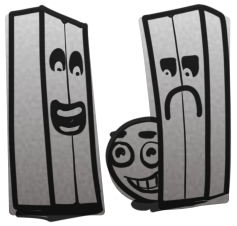
SOFTWARE

DRAGONFRAME ($)
MOHO ($)
PROCREATE ($)
PHOTOSHOP ($)
AFTER EFFECTS ($)
STOP MOTION STUDIO (FREE)

WHAT YOU NEED

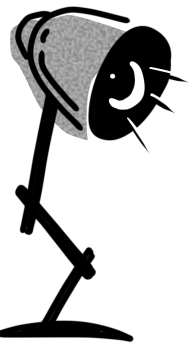
A SHORT AND SWEET LIST OF THINGS YOU MIGHT NEED TO GET STARTED WITH STOP MOTION. (NOT EXTENSIVE OR COMPLETE)

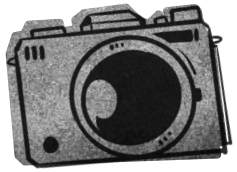
- PLASTICINE/ POLYMER CLAY



- PATIENCE

- CRAFT SUPPLIES (PAPER, GLUE,. TAPE, SCISSORS, ETC)
- LIGHTS





WHAT CAMERA SHOULD I USE?

There are a ton of ways you can optimize Camera Choice.
I recommend starting with a smartphone. paired with stop motion studio app (free) you can control things like shutter and focus. Upgrading to a DSLR will give you finer control with different lens choices and image quality.

TIPS AND TRICKS

TIP 1 OVERHEAD VS 90°

START WITH AN OVERHEAD CAMERA SETUP. WITH 90° YOU'LL HAVE TO FIGHT GRAVITY, WEIRD SHADOWS AND OFTEN TIMES YOU CAN FAKE SHOTS TO LOOK 90°

TIP 2 DIRECT LIGHT VS INDIRECT LIGHT

TO KEEP AWAY UNWANTED SHADOWS AND TO SOFTEN THEM UP, DIRECT YOUR LIGHT AWAY FROM YOUR SUBJECT.

TIP 3 REVERSE IS NOT THE WORST

OFTEN TIMES YOU'LL HAVE AN IDEA FOR AN ANIMATION BUT CAN'T QUITE FIGURE OUT HOW TO GET THERE FROM FRAME 1. TRY STARTING FROM THE LAST FRAME AND WORKING YOUR WAY BACKWARDS..

APPENDIX A

Further READING

BOOKS

ANIMATORS SURVIVAL KIT RICHARD WILLIAMS
STOP MOTION FILMMAKING CRISTOPHER WALSH
THE ANIMATORS WORKBOOK TONY WHITE
ILLUSION OF LIFE:DISNEY ANIMATION F THOMAS AND O JOHNSTON

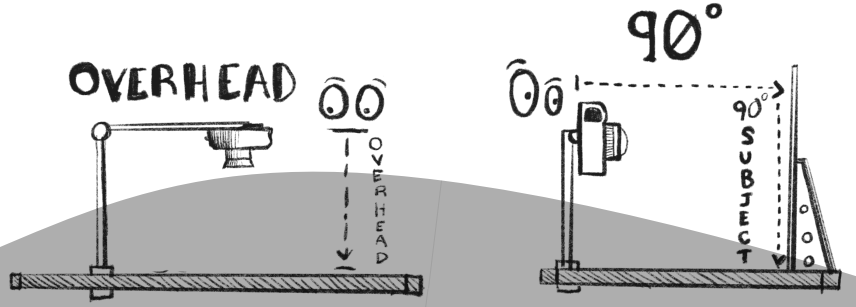
MOVIES/SHORTS

LOOKING RHYMES (1988) ROZE STIEBRA
SON OF THE WHITE MARE (1981) MARCELL JANKOVICS
PINOCHIO (2022) GUILLERMO DEL TORO
DIMENSIONS OF DIALOGUE (1982) JAN SVANKMEYER
FRESH GUACAMOLE (2013) PEZ
NIGHTMARE BEFORE CHRISTMAS (1993) HENRY SELLICK
MEMOIR OF A SNAIL (2024) ADAM ELLIOT
WALLACE AND GROMIT: THE WRONG TROUSERS (1993) NICK PARK

ARTISTS/ANIMATORS I ADMIRE

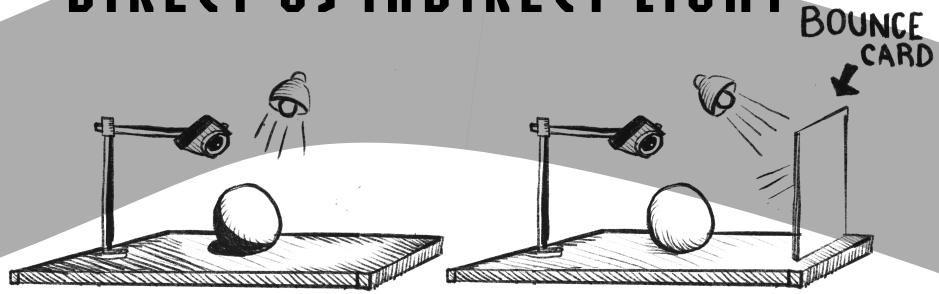
WILL VINTON JAN SVANMAJER
LOTTE REINIGER DAVID DANIELS
RICH ZIMAN, BROTHERS QUAY PEZ
GUILDES LEE HARDCASTLE PATAGRAPH
SAMPLER TIMES STEFANO COLFERAI \
BIG WHOOP KEVIN B. PARRY
BENOIT.LEVA . GUILDES

OVERHEAD CAMERA VS 90° CAMERA



OVER HEAD CAMERA SET UPS ARE MORE PRONE TO LENS CREEP. LENS CREEP IS WHEN THE CAMERA AND LENS SLOWLY MOVES (BECAUSE OF GRAVITY) OVER TIME. MAKE SURE TO REALLY TIGHTEN UP HOW IT HANGS OVERHEAD!

DIRECT VS INDIRECT LIGHT



WHEN YOU BOUNCE THE LIGHT, YOUR ANIMATION IS LESS PRONE TO LIGHT FLICKER. LIGHT FLICKER IS WHEN THE LIGHT CONDITION CHANGES FROM FRAME TO FRAME, CAUSING A NOTICEABLE FLICKER IN YOUR ANIMATION. TRY STANDING AWAY FROM YOUR SUBJECT TO AVOID LIGHT FLICKER CAUSED BY THE SHADOW OF YOUR BODY.

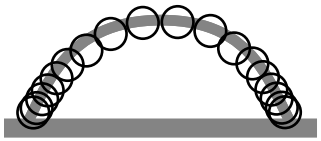
CONCEPTS OF ANIMATION

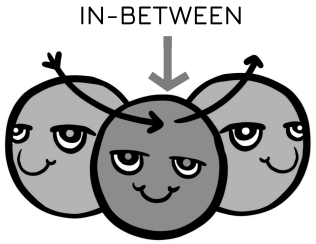
FRAMES PER SECOND (FPS)

How many frames are played overtime. The lower the FPS, the slower the animation will play back, making your animation jittery.

EASE IN/ EASE OUT

Motion is never a straight line. When Objects move, they tend to speed up (accelerate) and slow down (decelerate) at a gradual rate (because of physics)



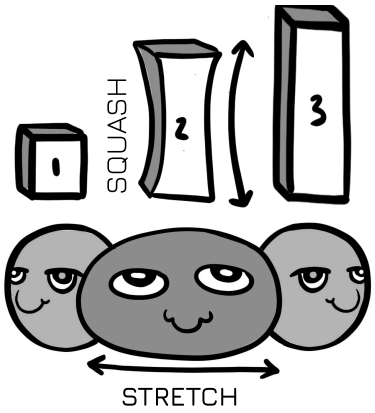


IN-BETWEENS

Frames animated between key motions or moments in your animation

SQUASH AND STRETCH

Real film tends to have blurred frames in between key moments of action. Animators began stretching and squashing the in-betweens to mimic this effect.



A TREATISE ON looping

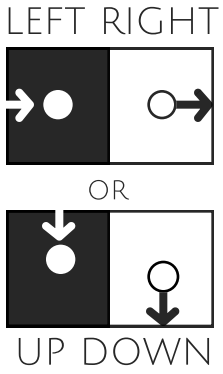
In the informationera where SOCIAL MEDIA rules, the emphasize on a looping video is hard to ignore. As infinite loops becomes more and more omnipresent*, it poses an interesting challenge for the burgeoning animator. Below are just a few tips for getting started with the loop..

PING PONG

One way to loop a video is by animated the object back and forth Like a ping pong ball. Animate your objects in one direction, copy and paste your frames in reverse, deleting any frames that repeat such as the middle frames and the first or last frame.

FRAME CUT

Another way to create continuous motion is by suspending the viewer's disbelief using a frame cut. A frame cut is when a moving object enters from one edge of the frame and leaves through the opposite frame. The viewers mind will fill in the unseen motion of the object traveling around and back to the first frame cut which creates the loop. The key to this trick is insuring the object always travels in the same direction of motion I.E. up/down or left/right..

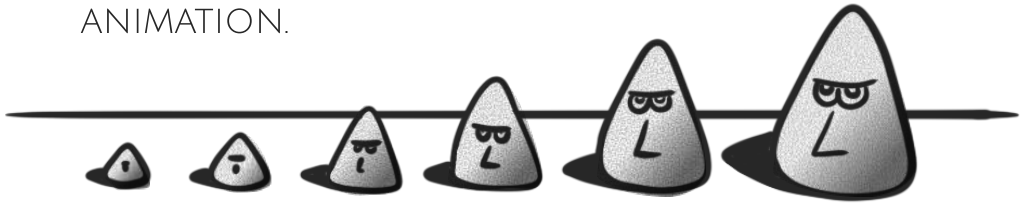


*By writing this treatise the author in no way implies that looping is the only way or best way to make something. The author recommends experimentation and breaking the RULES and having fun as the best way, of course.

ACTIVITY THREE REPLACEMENT ANIMATION

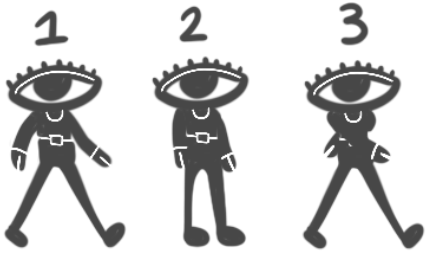
REPLACEMENT ANIMATION IS WHEN YOU PREFAB THE ELEMENTS OF ANIMATION FOR EACH FRAME TAKEN. THIS IS GOOD FOR SEQUENCES THAT NEED LOTS OFF REPETITIVE MOTION SUCH AS GROWTH SEQUENCES AND STICK FIGURE WALK CYCLES.

1 LETS MAKE SOMETHING GROW. PREFAB EACH SHAPE OUT OF CLAY, STARTING WITH THE SMALLEST SIZE AND ENDING WITH THE LARGEST. THE MORE PIECES, THE LONGER THE ANIMATION.



TO ANIMATE A GROWTH SEQUENCE, START WITH THE SMALLEST PIECE, CAPTURE, THEN REPLACE WITH THE NEXT SIZE UP. CONTINUE CAPTURING EACH SIZE INCREASE UNTIL YOU REACH THE END,

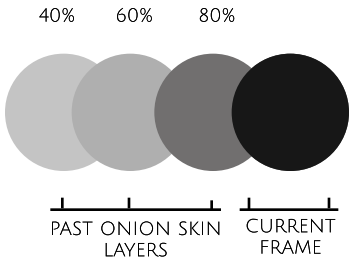
2 IN A WALK CYCLE, CUT OUT 3 POSITIONS OF LEGS .



ANIMATE THEM IN SEQUENCE BY LINING UP EACH CUT OUT WITH THE PREVIOUS CUT OUT'S POSITION. THIS WILL LOOP CONTINUOUSLY.

ONION SKIN

THE TERM ANIMATORS USE TO DESCRIBE HOW PREVIOUS LAYERS ARE VISIBLE THROUGH YOUR CURRENT ACTIVE FRAME OR LAYER . USE ONION SKINNING TO MAKE YOUR PREVIOUS FRAMES VISIBLE AND TO SEE A GHOST OF YOUR MOTION TAIL YOUR CURRENT FRAME

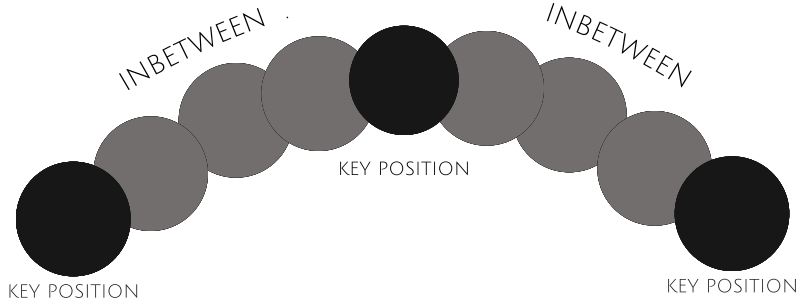


WITH CERTAIN SOFTWARE ANIMATORS CAN ADJUST HOW MANY OF THE PREVIOUS FRAMES ARE VISIBLE AND HOW VISIBLE THEY ARE. (TRADITIONAL ANIMATORS DREW ON TRACING PAPER IN ORDER TO 'ONION SKIN' THEIR WORK).

STRAIGHT AHEAD VS POSE TO POSE

STRAIGHT AHEAD IS WHEN ANIMATORS START ANIMATING FROM FRAME ONE AND CONTINUE STRAIGHT ON ANIMATING UNTIL THE LAST FRAME.

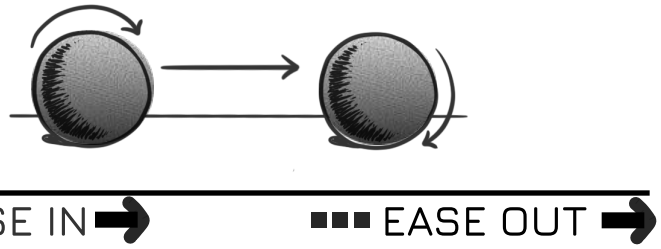
POSE TO POSE IS THE TECHNIQUE ANIMATORS USE TO ANIMATE FROM KEY POSITION TO KEY POSITION. THEY THEN GO BACK AND FILL IN THE MOTIONS WITH 'IN-BETWEEN' DRAWINGS.



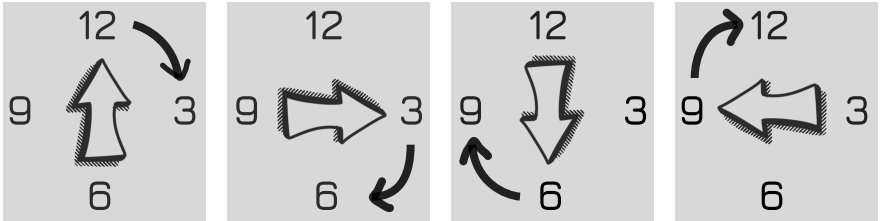
ACTIVITY ONE BASIC MOTION

1 USING A BALL OF CLAY, SLIDE IT ACROSS THE SCREEN. PRACTICE INCREASING AND DECREASING THE # OF FRAMES USED IN THE MOTION

2 NOW, ROLL THE BALL ACROSS THIS TIME. FOCUS ON SPACING AND EASING IN/OUT OR ACCELERATING/DECELERATING.

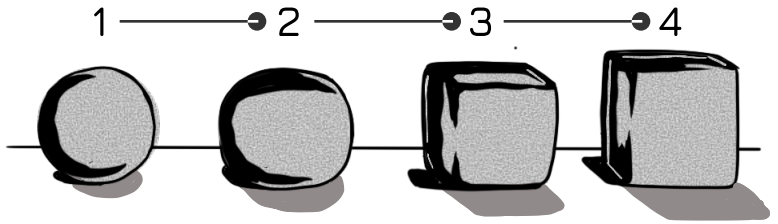


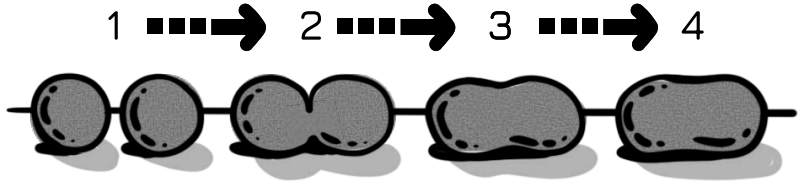
3 SCULPT AN ARROW, TRIANGLE OR OTHER POINTED SHAPE. PRACTICE SPINNING IT IN PLACE, LIKE THE HANDS OF A CLOCK, BREAK THE MOTION INTO EVEN INCREMENTS, CHANGING THE POSITION FROM 12 O'CLOCK TO 1 O'CLOCK, FOR EXAMPLE. TRY A SECOND ATTEMPT, ADDING MORE EVENLY SPACED INCREMENTS TO YOUR SPIN.

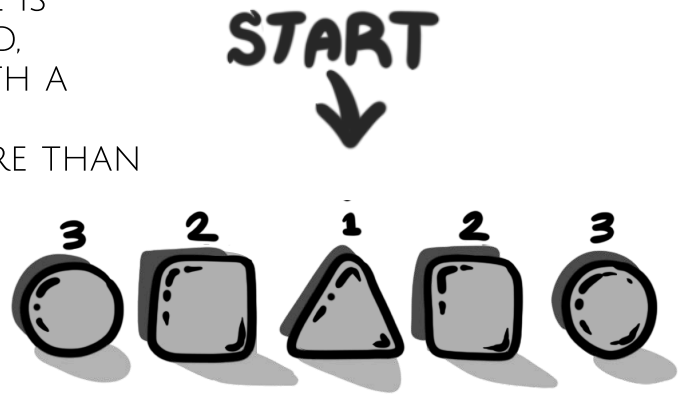


ACTIVITY TWO MORPH

1 START WITH ONE SHAPE, END WITH ANOTHER. ADD MORE FRAMES OF THE MORPH AT BEGINNING AND END TO 'EASE' THE MOTION.





MORPHIN TIPS AND TRICKS

SOMETIMES STARTING IN THE MIDDLE IS RECOMMENDED, ESPECIALLY WITH A MORPH THAT INCLUDES MORE THAN TWO SHAPES.